

## ABSTRACT

In a surface plasmon resonance sensor including a chip with a substrate 102 and a metal layer 103, a prism 104, an optical system 105 serving as a light source, and a light detector 106, the metal layer 103 is configured by a flat part 109 formed into a thin film, and convex parts formed from metal particles 110 and the like arranged spaced apart from each other. When light enters the metal layer 103 of such configuration, resonance angle arising from the flat part 109 and the convex parts are respectively obtained. The change in index of refraction of a medium contacted by the metal layer is detected from such resonance angle.